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6-2010

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Repository Citation

Adams, Ingrid, "Understanding Diabetes" (2010). *Family and Consumer Sciences Publications*. 2.
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Understanding Diabetes

Ingrid Adams, Nutrition and Food Science

Diabetes is a disease that affects 180 million people in the world, and this number is expected to double in the next 20 years. A diagnosis of diabetes is not a death sentence, but to remain in good health you must learn all you can about the disease and how to manage it. You need to take ownership of your diabetes and keep blood glucose within a target range that is good for you. Your health care provider can work with you to help you get to your target blood glucose range.

What is Diabetes?

Diabetes is a condition in which blood glucose levels are higher than 126 mg/dl. Most of the food we eat is turned into glucose, which our bodies use for energy. The pancreas makes a hormone called insulin to help glucose get into the cells of the body. When you have diabetes, the body either doesn't make enough insulin or the cells can't effectively use the insulin that is made. When there is insufficient insulin, blood glucose levels become high. When glucose builds up in the blood instead of going to the cells it can lead to diabetes complications.

Dangers

Having high blood glucose over a period of time can damage large and small blood vessels and nerves in the body.

Damage to large blood vessels may lead to:

- Poor circulation
- Heart attack
- Strokes

Damage to small blood vessels may lead to:

- Eye disease
- Kidney disease

Damage to nerves may lead to:

- Pain
- Loss of feeling in the hands, legs, and feet
- Weak muscles

Symptoms

Common symptoms of diabetes include:

- Excessive urination
- Excessive thirst
- Excessive hunger
- Fatigue
- Blurred vision
- Tingling in hands and feet
- Itchy dry skin
- Sores and cuts that don't heal or heal very slowly
- Impotence in males
- Vaginal yeast infections in females

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Pre-Diabetes

This is a condition where the blood glucose levels are higher than normal but not high enough for the individual to be diagnosed with diabetes. Individuals with pre-diabetes tend to develop diabetes within 10 years of diagnosis. Pre-diabetes increases the risk of diabetes and stroke. Modest weight loss and physical activity can prevent or delay pre-diabetes.

Obesity is the most important risk factor in type 2 diabetes, and even a small amount of weight loss is associated with a lower risk for the disease.

Types of Diabetes

Type 1

Type 1 diabetes is usually found in children and young adults. In this type of diabetes the cells that protect the body (immune cells) attack and destroy the cells in the pancreas that make insulin. Individuals with type 1 diabetes depend on insulin injections to live.

Type 2

Type 2 diabetes was once called “adult onset diabetes.” It is the most common form of diabetes, making up 90 to 95 percent of all diagnosed cases. It begins when the cells of the body are not able to use insulin. As a result, glucose does not get into the cells to produce energy. The pancreas works to make more insulin, but eventually it loses the ability to produce enough insulin.

Type 2 diabetes usually occurs in individuals who are obese, but it can occur in non-obese individuals as well. Obesity is the most important risk factor in type 2 diabetes, and even a small amount of weight loss is associated with a lower risk for the disease.

Risk factors for type 2 diabetes include:

- Older age
- Family history
- Impaired glucose tolerance
- Physical inactivity
- Race or ethnicity
- Being overweight

Gestational

Gestational diabetes develops during the late stages of pregnancy and generally goes away after the birth of the baby. A woman who has developed gestational diabetes is more likely to develop type 2 diabetes later in life.

To Manage Diabetes

- Make healthy food choices.
- Pay attention to portion sizes.
- Be active. (Get clearance from your doctor before you begin physical activity.)
- Monitor your blood glucose.
- Take medication as prescribed by your doctor.
- Learn to solve diabetes-related problems.
- Reduce risky behaviors such as smoking.
- Learn to cope with situations in healthy ways.

Adapted from the American Association of Diabetes Educators Self-care Behaviors

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